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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,607	08/16/2006	Hitoshi Matsubara	47233-5006	2679
55694 7590 05/18/2011 DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209				
EXAMINER SCHMIDTMANN, BAHAR				
ART UNIT		PAPER NUMBER		
1623				
NOTIFICATION DATE		DELIVERY MODE		
05/18/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DBRIPDocket@dbi.com  
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### Office Action Summary

**Application No.**

10/589,607

**Applicant(s)**

MATSUBARA ET AL.

**Examiner**

BAHAR SCHMIDTMANN

**Art Unit**

1623

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-33, 51 and 52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-33, 51 and 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to Applicant's Amendment and Remarks filed on 11 March 2011 in which claims 1-27 and 34-50 were canceled and claims 28-30 and 33 were amended to change the scope and breadth of the claims.

Claims 28-33, 51 and 52 are pending in the current application and are examined on the merits herein.

### ***Withdrawn Rejections***

Applicant's amendment, filed 11 March 2011, with respect to the rejection of claims 28, 29 and 51 under 35 U.S.C. § 102(b), as being anticipated by Suehiro et al. (JP 06-009607) has been fully considered and is persuasive. The claims have been amended to limit the adsorbent to activated charcoal, and to contact the aqueous liquid with the charcoal at a temperature of at least 50 °C. The claim as amended more specifically claims the subject matter disclosed and supported in Applicant's Specification.

The rejection is hereby **withdrawn**.

### ***New/Modified Rejections***

The following are new ground(s) or modified rejections necessitated by Applicant's amendment, filed on 11 March 2011, where the limitations in pending claims 28-30 and 33 as amended now have been changed. Therefore, rejections from the

previous Office Action, dated 17 November 2010, have been modified and are listed below.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 29, 32, 33 and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The recitation "passing the aqueous extract of tea leaves through the column filled with the activated charcoal in an amount at least 3 times greater than the capacity of the column" in presently amended claim 29 renders the claim and its dependent claims 32, 33 and 51 herein indefinite. This limitation can be interpreted in at least two ways. The first: the aqueous extract of tea leaves are used in an amount at least 3 times greater than the capacity of the column. The second: the activated charcoal is used in an amount at least 3 times greater than the capacity of the column.

Clarification is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 28-33, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seto et al. (JP 08-109178, English translation cited in previous Office Action) in view of Green et al. (EP 0040712, cited by Applicant in Information Disclosure Statement).**

Seto et al. teaches a method of manufacturing low-caffeine tea polyphenol (abstract). Seto et al. teaches the tea extract can come from oolong tea (p.5, paragraph 0008). Seto et al. teaches dissolving 10 grams of green tea extract in 20 mL water and applying it to a glass column packed with 300 mL of a synthetic adsorbent, SP-207 (p.9, example 1). Seto et al. teaches the column was eluted with 1500 mL of a buffer solution at pH 10 (p.9, example 1). Seto et al. teaches concentrating and drying the fraction (p.9, example 1). Seto et al. teaches the tea extract is a hot-water extract of tea or a product obtained by treating the hot-water extract with a resin or an adsorbent (claim 2 and p.5-6, paragraph 0009). Seto et al. teaches the tea polyphenol can be

utilized in beverages such as alcoholic liquors, soft drinks and instant drinks (p.8, paragraph 0013).

The ratio of extract to absorbent can be estimated by adding 10 grams of green tea extract to 20 g water (estimated to be equivalent to 20 mL water) to 1500 g buffer (estimated to be roughly equivalent to 1500 mL buffer, which gives 1530 grams of tea extract to 300 g synthetic adsorbent (estimated to be roughly equivalent to 300 mL synthetic adsorbent). A mixture of 1530 grams of tea extract to 300 grams of adsorbent provides a ratio of 5.1:1 extract to column capacity.

Seto et al. does not expressly disclose the temperature of the aqueous liquid as 50 °C, or wherein the absorbent is activated charcoal (instant claims 28 and 30).

Green et al. teaches a method for removing caffeine from coffee comprising contacting an aqueous solution of the coffee with activated carbon at a temperature of 60 °C to 90 °C (claim 2). Green et al. teaches the caffeine is absorbed onto the activated carbon (claim 1).

It would have been obvious at the time the invention was made to purify oolong tea, wherein an aqueous liquid comprising oolong tea extract is contacted with activated charcoal at a temperature of at least 50 °C.

Based on the teachings of the MPEP and KSR cited in the previous Office Action, by employing the rationale in (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention; one having ordinary skill in the art would have been motivated purify oolong tea, wherein an

aqueous liquid comprising oolong tea extract is contacted with activated charcoal at a temperature of at least 50 °C.

From Seto et al., one having ordinary skill in the art would have known that mixing hot water with tea leaves and then subsequently subjecting it to an absorbent resin can selectively remove caffeine. Similarly, Green et al. teaches mixing coffee with hot water while contacting it with activated carbon to selectively remove caffeine. Thus, from the prior art references, one having ordinary skill in the art would have known that caffeine can be removed from natural products by mixing the product with an aqueous liquid and contacting it with an adsorbent resin. More specifically, one having ordinary skill in the art would have known that the contacting step can be performed at a temperature greater than 50 °C and the absorbent resin can be activated charcoal. One would have been motivated to do so because Green et al. teaches this process results in a product with substantially no caffeine (claim 5).

Additionally, one having ordinary skill in the art would have been motivated to extract oolong tea, since it is one of four teas exemplified by the Seto et al. reference and used the extract in a beverage as suggested. Similarly, one having ordinary skill in the art would have been able to at once envisage performing the above method steps using oolong tea.

The eluting solvent is added to the top of the tea extract, therefore the tea extract is passed through the column with the excess of solvent, in a ratio of at least 5.1:1 extract passed through column to resin. Therefore, Seto et al. meets the extract to resin ratio recited in instant claims 29 and 32. **According to MPEP 2111.04:** However, the

court noted (quoting *Minton v. Nat 'l Ass 'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003)) that a "whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited." *Id.*

The steps performed by Seto et al. recited, results in a separation of polymerized and non-polymerized catechins. The recitation "wherein the composition has a higher ratio of the polymerized catechins to the non-polymerized catechins than that of the aqueous liquid" " and "to selectively remove the non-polymerized catechins to obtain the composition" is the result of performing the positively recited steps and it is not necessary for the prior art to recognize this property of the obtained product.

Thus, the claimed invention as a whole is *prima facie* obvious over the combined teaching of the prior art.

### ***Response to Arguments***

I. Applicant has mainly argued that the claims are not obvious over the cited references, because they fail to teach (1) contacting the aqueous liquid with an activated charcoal and (2) at a temperature of at least 50 °C to selectively remove the non-polymerized catechins.

Applicant's arguments with respect to claims 28-33, 51 and 52 have been considered but are moot in view of the new ground(s) of rejection.

II. Applicant has also argued the claimed methods are unexpectedly advantageous by selectively removing non-polymerized catechins. Applicant contends that the prior



art does not teach, suggest or provide motivation to separate polymerized catechins from non-polymerized catechins.

This argument is not found persuasive, since the modified obviousness rational above explains why it would have been obvious at the time the invention was made to perform the positively recited method steps. Selectively removing non-polymerized catechins is the intended result of the positively recited steps and do not have patentable weight. According to MPEP 2111.04: "However, the court noted (quoting *Minton v. Nat 'l Ass 'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003)) that a "whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited.".

III. Applicant further argues that Suehiro teaches away from the presently claimed methods.

This argument is not found persuasive. For one, the rejection of Suehiro has been withdrawn in view of Applicant's present amendments. Second, Suehiro was applied under 35 U.S.C. §102 only. Under the 102 statute, arguing that a reference teaches away is not a proper rebuttal to overcome anticipation.

Thus, the rejection is hereby **maintained**.

### ***Conclusion***

In view of the rejections to the pending claims set forth above, no claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. BAHAR SCHMIDTMANN whose telephone number is (571)270-1326. The examiner can normally be reached on Mon-Thurs 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Shaojia Anna Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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